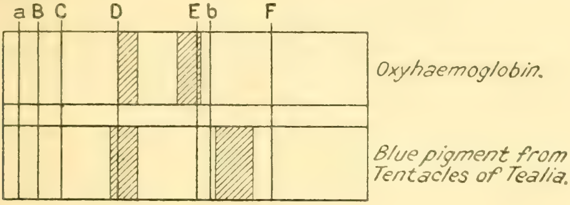
colouring-matter and hæmoglobin derivative (respiratory pigment) than the deep-water forms. As in *Actinia* the lipochrome-screen presumably acts as an optical sensitiser.

(2) A distinctive new hæmoglobin derivative occurs in a certain lavender-tinted deep-water colour-variety of *Tealia crassicornis.*



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LXXI.—*On some Butterflies from New Guinea and Tenimber.* By the Rev. G. HULSTAERT, M.S.C. (Heverlee, Louvain).

TWO new races of butterflies are described in the following pages, and a note is added on a form described in a former paper.

The types of the new races are in our collection at Heverlee.

Pieridæ.

Delias argenthona balli, Hulst.

Under this name I described, in the Ann. & Mag. Nat. Hist. (9) xi. p. 180 (1923), as a ♀ form a specimen in our collection which, unfortunately, was unlabelled. Although there was some probability that this specimen came from Merauke (Southern Dutch New Guinea), I did not give any locality, as I was uncertain, especially as *D. argenthona*, F., was not then known from New Guinea. Considering, however, the history of our collection, it is very probable that this female came from Merauke. This has been confirmed by a letter from Mr. G. Talbot, who was about to publish the description of a female specimen of *D. argenthona* in the Fruhstorfer collection coming from this locality. This description, which the well-known lepidopterologist kindly communicated to me, agreed with the specimen described by me as ♀ f. *balli*, and Mr. Talbot also considers them the same. Thus the New-Guinean origin of ♀ f. *balli* is sufficiently certain, and this form is to be considered as a good local race.

In addition to this female, our collection contains an unlabelled *D. argenthona* ♂, which probably also came from Merauke for the same reason as indicated for the female, and which I think to be the ♂ of *D. a. balli*, although it differs but slightly from the typical Australian race.

In accordance with these considerations, I now describe this ♂ specimen, adding a more complete description of the ♀ than that given originally in this Magazine.

♂. *Above.*—Almost completely like true *argenthona*. Fore wing: subapical markings smaller, shorter; black border rather far from cell, regularly rounded and narrowed proximally, only 3–4 mm. on vein 4, 1 mm. below vein 3; black costal border closely irrorated with white to beyond middle. Hind wing: black border hardly dentate on veins, which are not black at their extremity, except vein 6.

Below.—Fore wing: black costal border entering 2 mm. into cell, covering the upper discocellular. Apical black, reaching the extremity of the cell, but leaving a proximally open white spot on middle discocellulars; subapical white spots smaller than in typical *argenthona*, but larger below than above; the spot between veins 4–3 touching discal white; black border dentate on vein 3 and a little on vein 2, covering vein 4 almost completely, regularly rounded, 2 mm. broad above vein 3, 1 mm. between veins 3 and 2. Hind wing: basal part yellow, white beyond origin of vein 7 and at extremity of cell between origin of veins 6 and 3. Outer black area regularly rounded-incurved, touching cell only at origin of vein 4; a small red discocellular spot, separated from the black area; red submarginal patches smaller than n *D. a. argenthona,* longer than broad, defined by whitish; black marginal border broader, especially towards tornus.

♀. *Above.*—Ground-colour dead-white; base of both wings irrorated with black and yellow. Fore wing: differs from forma *seminigra*, Fruhst., in discocellular white spot being very small, subapical markings also smaller; black border covering extremity of cell, origin of vein 4, and outer half of vein 3. Hind wing: black terminal area diffusely limited by a rather broad area of grey suffusion; no discocellular nor submarginal markings, the transparent red patches of the underside taking their place.

Below.—Fore wing dead-white, base yellow; black border similar to above, discocellular and subapical white patches somewhat larger than above. Hind wing: basal half yellow, except a little white on costal part before black terminal area, which is distinctly limited, but not regularly rounded, passing through the extremity of the cell from beyond origin of vein 6 to that of vein 3. Red discocellular patch rather large, occupying the whole lower discocellular; submarginal patches somewhat broader than in the ♂, less distinctly surrounded with white, the band regularly rounded distally; black terminal border broad.

1 ♂, 1 ♀, Merauke, Southern Dutch New Guinea.

Note.—No doubt, many of the characteristics given above will prove simply individual when large series are examined. The racial character certainly in the ♂ is the larger extent of the apical black on the underside of the fore wing; the ♀ characters are given in Ann. & Mag. Nat. Hist. *l. c.*

Terias libythea dionysia, subsp. n.

♂. *Above.*—Darker yellow than in *T. l. zoraide*, Feld., dusted with black scales at the base. Black border of fore wing broader, extending to the point of separation of veins 6 and 7, narrowing regularly towards inner margin. Hind wing: border broader, 2 mm. under vein 6, dentate on veins 6 and 7, narrowing regularly and not so abruptly as in *T. l. zoraide,* Feld., and *drona*, Horsf.

Below.—Rather closely dusted with black scales, especially on hind wing, but no traces of cloudy bands; black terminal dots on veins. Fore wing: a stripe on discocellulars, a small dot in the cell. Hind wing: a small dot under vein 8 and one on lower discocellular.

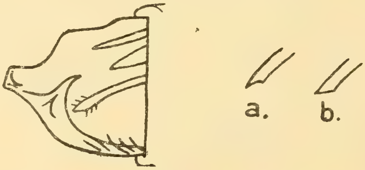
Genitalia (text-fig.).—Claspers somewhat broader than in *T. l. zoraide,* more abruptly narrowed; no dorsal hook nor tooth at middle ; extremity a little more rounded, its dorsal angle right, not acute ; hook of harpes not so long as in *zoraide*, more inwardly curved. Penis similar to that of *T. l. zoraide*, but not so acutely truncate at extremity, the truncation not sinuous, but straight.

Expanse.—35 mm.

1 ♂, Olilit (Jamdena), Tenimber, 1918 (*Rev. D. van Roessel, M.S.C.*).

This race differs from the allied *zoraide* and *drona*, in addition to the characters given above, by the shape of the wings, which are rounder, especially the posterior pair, and by the black border of the hind wing narrowing less abruptly, but remaining of nearly equal breadth up to the tornus. On account of the genitalia, however, this form seems to constitute only a local race.

The discovery of *T. libythea* in the Tenimber group is very interesting, three species of the genus *Terias* being already known from there—*T. apatosa*, Hulst., *T. hecabe brevicostalis*, Butl., and *T. libythea dionysia*, Hulst. It would not be surprising if still further species, such as *T. candida*, Cr., and some Australian ones, should be found on these islands, on account of their known relationship with Australia and New Guinea on the one hand, and with the Timor group and the Lesser Sunda Islands on the other.



Genitalia of *Terias libythea dionysia*, subsp. n.

a, profile view of extremity of penis of *T. l. zoraide*; *b*, ditto of *T. l. dionysia*, subsp. n.

Danaidæ.

Euplœa confusa marinda, subsp. n.

Near *E. c. catana*, Fruhst.

♂. Fore wing rounder than in this race.

Above.—Much darker, almost completely black ; discal pale area entirely brownish yellow, not lighter distally, not so large as in *catana* and in *iapudia*, Fruhst., not extending into cell nor above half interspace 3, remaining some mm. from outer margin, just passing vein 1, not reaching base of wing, its costal edge rounded, sharply limited above, diffusely towards termen and inner margin; the ground-colour between it and the inner margin brownish, paler than the rest of wing. Hind wing similar to that of *catana*, but uniformly blackish, except a narrow brown anal area.

Below.—Still darker than above. Fore wing: discal pale area similar to that of *catana*, but not so large, scarcely entering into cell, reaching proximal half of vein 3, rounded costally, remaining some 3 mm. from termen, reaching inner margin. Hind wing: faint traces of the blue circumcellular spots.

1 ♂, Merauke, 1912 (*Rev. J. Viegen, M.S.C.*).

It is interesting to note the resemblance in the darkening process which exists between this new form and the Merauke race of *Euplœa alecto*, Butl. (*cf.* Ann. & Mag. Nat. Hist. (9) xi. p. 182, 1923).

LXXII.—*New Species of Crane-flies collected by Mr. G. V. Hudson in New Zealand.* By F. W. EDWARDS.

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THE seven new crane-flies described below were included in a very interesting collection received from Mr. Hudson in the spring of 1922, and form a very valuable addition to the already extensive series previously presented by him to the National Collection, besides furnishing additional evidence of the extensive and varied crane-fly fauna of New Zealand. The forms here described appear distinct from all those recently made known by Alexander, and bring the total number of New Zealand species to just about 300.

Tanyderus marginatus, sp. n.

Head heavily dusted with light ochreous, and clothed with long brown hair. Proboscis and palpi dark brown, the former nearly twice as long as the head and rather longer than the neck. Eyes almost but not quite touching above the antennæ. Antennæ with the scape dark brown; flagellum light brown, the segments all cylindrical, practically equal in length, and with rather inconspicuous pubescence, which is scarcely as long as the diameter of the segments (in *T. annuliferus* it is distinctly longer). Neck long and slender, dark brown. *Thorax*: pronotum dark brown in the middle, ochreous at the sides. Mesonotum with the ground-colour light grey, the three brown stripes just separated, long but inconspicuous brown hair along the interspaces. Scutellum